

RTI Data Package Checklist

Package Completeness- 1.) Check the data package for completeness. Each RTI data package should contain at a minimum the following pages: a.) Chain of custody forms for each individual shipment to and from each regional office and local program. b.) Gravimetric Laboratory PM Receiving Log. c.) Filter Equilibration/ Weighing Control Charts Humidity and Temperature. d.) Filter Weight Data Sheets. e.) QA/ QC Data Sheets. f.) Filter Inventory and Inspection Form. g.) Gravimetric Laboratory Shipping Log. 2.) Note any discrepancies and immediately contact RTI and request missing pages. 3.) Verify that the entire package has undergone internal RTI review and bears the signatures of the RTI Lab Manager, and the RTI QA Manager. 4.) Verify that the Data package includes reports from all DAQ regions and local programs. Immediately contact RTI and any non-reporting region or program for explanation. 5.) Record the results of all checks on an RTI Data Package Verification Sheet.

Chain of Custody Sheets- 1.) Verify that there are COC forms from each region and local program which correspond to **each delivery** documented on the **RTI Receiving Log**. Verify that the filter numbers listed on the COC forms correspond to the numbers listed on the RTI Receiving Log, the Filter Inventory and Inspection Form, the Gravimetric Laboratory Shipping Log and the Filter Weigh Data Sheet. Note any discrepancies or missing filter numbers and immediately contact RTI and the appropriate regional office or local program to resolve the problem(s). Filter data is invalid if COC is broken. 2.) Check to make sure each COC form is completely filled out and signed by both RTI and appropriate regional or local program staff. Contact appropriate party to immediately rectify any discrepancy.

Gravimetric Laboratory PM Receiving Log – 1.) Verify that for each filter shipped there is a corresponding entry in the receiving log indicating the return of the filter. Since filters may be returned as used, there may be several entries in the receiving log for each batch of filters sent to the field. 2.) For any missing filters, determine cause. Contact regional office or local program and document reason for lost filter. 3.) Verify temperature of received shipment is properly recorded in RTI receiving log. 4.) Verify RTI QA signature and date. 5.) Verify for the filters shipped, no holding times were exceeded.

Filter Equilibration/ Weighing Control Charts – 1.) Verify that for each separate weighing session control charts are included which provide minimum and maximum temperature and humidity readouts for both the equilibration and weighing sessions for all filters. 2.) Verify that control charts include readouts of both temperature and humidity taken from both the equilibration, and weigh chambers if different, and that the readouts cover the entire period of filter equilibration and weighing. 3.) Verify that for the entire period, both parameters met the requirements listed in Table 4 Measurement Quality Objectives for the RTI FRM Program found on page 21 of the RTI revised QAPP (RTI QAPP). Note any discrepancy and immediately contact RTI for detailed explanation. 4.) Verify that the equilibration time recorded for the batch matches the equilibration period determined from the Filter Lot Stability Test conducted earlier by RTI. Note any discrepancies and contact RTI for explanation.

Filter Weight Data Sheets – 1.) Verify that for each filter shipped to the regions and local programs, the numbers match those in the filter weight data sheet. 2.) Verify that all fields in the weight sheet are completed. 3.) Verify that temperature and humidity data match the filter equilibration/ weighing control charts provided in the data package. 4.) Verify the initial weigh dates, shipping dates, return dates, equilibration dates, and receipt temperature information matches the other pages of the data package. Note any discrepancy and immediately contact RTI for explanation. 5.) Note the final weigh

date(s) listed and verify that the dates meet the requirements listed in Table 4 Measurement Quality Objectives of the RTI QAPP page 21. Note any discrepancies and immediately contact RTI for explanation. 6.) Compare filter final weight to filter initial weights and filter mass loading. Select at random two filters or 10% of the total for each individual weighing session (whichever is greater) and manually calculate the net mass filter loading by subtracting the initial filter weight from the final filter weight. Record results on RTI Data Package Check Verification Page. Note any discrepancies and immediately contact RTI for explanation. 7.) Note any comments listed on the filter data sheet that might impact the quality of the data reported. Contact RTI for additional information as necessary. Note particularly any information that will effect data quality on the RTI Data Package Verification Page. Contact RTI for further information and immediately notify both the DAQ Lab and PPB supervisors. 8.) Verify that all Field Banks, Trip Blanks, Lab Blanks and Duplicate Checks are present in the quantity required in Table 5 Measurement Quality Objectives on page 23 of the RTI QAPP, and that each blank and duplicate meets the acceptance criteria listed in that table. Note any discrepancies and immediately contact RTI for additional information as necessary. Record the results of all work on the Data Package Verification Sheet.

QA/ QC Data Sheets – 1.) Examine the included RTI QA/ QC Data Sheets. Verify that for each weigh session the required QC checks are present in the required frequency and meet the acceptance criteria listed in Table 5 on page 23 of the RTI QAPP. 2.) Select at least 2 of the QC checks or 10 % (whichever is greater) and manually verify the difference reported meets the requirements listed in Table 5 of the RTI QAPP. Record results on RTI Data Package Verification Sheet. Immediately contact RTI for additional information in the case of a discrepancy.

Filter Inventory Inspection Form – Review the filter inventory inspection form. 1.) Compare the filter numbers inspected to the filter numbers on the other sheets in the RTI Data Package. Note any discrepancies. Contact RTI for explanation. 2.) Verify that no rejected filters were included in the filters sent to the field. Record the filter numbers of any rejected filters that were sent to the field on the data package verification sheet. These filters are invalid and not suitable for use. Contact RTI for explanation.

Gravimetric Laboratory Shipping Log- Review the shipping log. 1.) Compare the filter numbers shipped to the filter numbers listed in the other pages of the data package. Note any discrepancies and contact RTI for additional information. 2.) Verify that filter packages were shipped from RTI by the dates specified in the RTI Contract and in time for use by regional and local program staff.

In addition, NCDQA should ask for and keep on file at a minimum the following documents from RTI: a.) Filter Lot Stability Test Sheet. b.) Calibration Sheet from latest Scale service. c.) HVAC Check Sheet from latest service. d.) Weight Certification Sheet from latest weight check. These are all considered QA documents that serve as the basis for the QC documentation supplied in the RTI Data Packages. These documents will be reviewed during the next TSA and should be on file at DAQ. The data package reviewer should also request from RTI any other documents that may serve as either QA or QC indicators for the values reported in the data package.

Email the completed Verification Sheet to Travis Funderburk, Joette Steger, and Jim Boyer. Place one copy in a file for future reference. Upload the RTI data package to IBEAM.

RTI PM Data Verification Form

Verification Performed By: _____ Date: _____ (Yr-Mo-Day)

Verification Period _____ (year quarter month ex. July 2021= 21Q107)

Filter #s covered _____ through _____

1a.) Is the package as received complete? (see RTI Data Package Checklist- Package Completeness)
 YES _____ NO _____ Contact RTI for missing pages before proceeding.

1b.) Are all Regions and Local Programs Reporting? YES _____ NO _____ Contact RTI or region or local program for missing data before proceeding.

1c.) RTI Data Package Certification present? YES _____ NO _____ Contact RTI if signatures missing

2a.) Are COC forms present for each shipment and complete? YES _____ NO _____ Contact appropriate party to correct discrepancies.

2b.) Do COC forms correspond to RTI shipping and receiving sheets in data package? YES _____ NO _____
 Correct any discrepancies before proceeding.

3a.) Do filter Equilibration/ Weighing Control Charts include minimum and maximum temperature and humidity values for all sessions? YES _____ NO _____ Contact RTI for missing data before proceeding.

3b.) Do Control Charts include 5- minute data for temperature and humidity for all equilibration/ weighing sessions? YES _____ NO _____ Contact RTI for missing data before proceeding.

3c.) Does equilibration time period match filter lot stability period? YES _____ NO _____ Contact RTI for additional information before proceeding.

4a.) Do Filter #s recorded on Filter Weight Data Sheet match COC forms, shipping and receiving logs? YES _____ NO _____ Correct any discrepancies before proceeding.

4b.) Do filter weigh dates meet requirements of MQOs listed in RTI QAPP? YES _____ NO _____
 Contact RTI to correct any discrepancy.

4c.) Select at random a minimum of 2 filters or 10% (whichever is more) and manually check tare weights. List results below. Do manual calculations match reported results? YES _____ NO _____
 Contact RTI and correct any discrepancy before proceeding. List results below.

Filter #	Initial Weight	Final Weight	Mass Loading	Agreement

Filter #	Initial Weight	Final Weight	Mass Loading	Agreement

4d.) Are field, trip, lab blanks and duplicate checks present and in the required quantity on the filter weight data sheets? YES _____ NO _____ Contact RTI to correct any discrepancies before proceeding.

4e.) Do all filter weights reported appear valid and correct? YES _____ NO _____ Contact RTI to correct any inconsistencies.

5a.) Select at random 2 (or 10% whichever is more) of the weight checks reported on the QA/ QC data sheet and manually verify their correctness. List results below. Do they meet the requirements in the RTI QAPP? YES _____ NO _____ Contact RTI to correct any discrepancy.

Location	200mg Check	Difference	500 mg Check	Difference

6a.) Do discrepancies exist between the RTI Shipping Log and the shipment times required in the RTI contract? YES _____ NO _____

7a.) Is the RTI Data Package complete and correct? YES _____ NO _____

Please add any additional comments from the data package verification below:

Send Copies of Completed Verification Sheet to : T Funderburk, J Steger, J Bowyer and upload sheet and data package to IBEAM for validation.